

RAILROAD COMMISSION OF TEXAS

UIC Permit Applications: Technical Review & Public Notification

David Hill, Manager

Underground Injection Control

Class II Injection & Disposal Well Permitting



Overview:

- Federal Classes of Underground Injection Control (UIC) wells
- Jurisdiction / Primacy
- Application Fees
- Permit Details
 - Forms and Attachments
 - Administrative Review
 - Technical review
- Web / Info Search



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Railroad Commissioner Christi Craddick hosted a Texas Oil and Gas Water Conservation and Recycling Symposium in Austin today [Read More...](#)

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Publications & Notices

Notices to Industry and Publications.

Manuals

- [Injection/Disposal Well Permitting, Testing, and Monitoring Manual](#)
- [Surface Waste Management Manual](#)
- [The Interim Guidance for Hazardous Waste \(Statewide Rule 98\) Manual](#)

Notices to Industry



Click on the 1st Bullet
for Injection and
Disposal Manual

Publications

- [Waste Minimization Program](#)
- [Filing Oil and Gas Reports Using Electronic Media](#)
- [Oil and Gas Statewide Rule 101 Approved Tight Gas Formation Listing](#)
- [Oil and Gas New Field Discoveries](#)
- [Subscriptions and Publications](#)
- [Drilling Permits Online Filing User's Guide](#)
- [Field Guide For Reportable Surface Releases of Crude Oil in Non-Sensitive Areas](#)
- [Statewide Rule 36 - Hydrogen Sulfide Safety](#)
- [Modern Shale Gas Development in the United States: A Primer](#)

Texas Severance Tax Incentives: Past and Present

- [Present Texas Severance Tax Incentives](#)
- [Past Texas Severance Tax Incentives](#)

Class II Injection & Disposal Well Permitting



Federal Overview

- Class I wells are wells into which hazardous wastes and non-hazardous industrial or municipal wastes are injected beneath the lowermost underground source of drinking water (USDW).
- Class II wells include enhanced oil recovery (EOR) injection wells and injection wells for the disposal of oil and gas wastes.

Class II Injection & Disposal Well Permitting



Federal Overview Continued

- Class III wells are associated with solution mining.
- Class IV wells are wells used for the shallow injection of hazardous wastes and have been banned except when used as part of authorized groundwater remediation projects.

Class II Injection & Disposal Well Permitting



Federal Overview Continued

- Class V wells include shallow injection of non-hazardous fluids not covered by Class I wells, and, in some cases, experimental wells.
- Class VI wells are recently created by EPA and are wells associated with CO₂ capture and storage (CCS) activities.

Class II Injection & Disposal Well Permitting



- State Jurisdiction in Texas For Injection Wells (Primacy)
 - Oil and Gas, and Related Activities: Railroad Commission of Texas (RRC)
 - Other Injection Activities: Texas Commission on
 - Environmental Quality (TCEQ)

Class II Injection & Disposal Well Permitting



- Class III at RRC
 - Solution Mining:
 - Salt Domes & Salt Caverns for storage of Hydrocarbons
 - Brine Mining Operations

Class II Injection & Disposal Well Permitting



Class VI at RRC

- Carbon Dioxide (CO₂) Storage:
 - Not the same as CO₂ Injection for Enhanced Oil Recovery (EOR) operations. EOR is part of Class II activities to be discussed later.
 - Class VI involves greater volumes and rates than Class II EOR, thus it is a different class of injection well.

Class II Injection & Disposal Well Permitting



Note: There are > 30,000 Active Class II Wells in Texas

Permit Procedures for Class II Wells:

- **Administrative Review**
- **Technical Review**
- **Managerial Review**
- **Hearing (Protests In Some Cases)**
- **Commission Public Meetings (Some Cases)**



Class II Injection & Disposal Well Permitting

Forms: Which to file?

- **Is the injection formation productive or non-productive?**
 - **Which form is determined by production current or past production within 2 miles**
- **File original application to Austin office**
- **Mail a copy to the district office**



Class II Injection & Disposal Well Permitting

Forms: Search window on website, Handouts

- **Form W-14**
 - **To apply for Disposal into a Non-Productive Formation**
 - **Statewide Rule 9**
- **Form H1 and H1A**
 - **To apply for Injection /Disposal into a Productive Formation**
 - **Statewide Rule 46**
 - **Multiple Zones: If a mix of Productive and Non-Productive**

Class II Injection & Disposal Well Permitting



- **Fees: Website or Handouts (including surcharges)**
- Rule 9 (Forms H1/H-1A) – non-productive formations
\$100 permit application fee (per wellbore)
- Rule 46 (Form W-14)– productive formations
\$500 permit application fee (per wellbore)
- Exception Request
\$375 (additional) each exception request
- These filing fees are non-refundable

Class II Injection & Disposal Well Permitting



Administrative Staff:

- Juanita Jimenez (512) 463-3576
Juanita.Jimenez@rrc.texas.gov
- Melanie Molien (512) 463-4032
Melanie.Molien@rrc.texas.gov
- Debra Turner (512) 463-6816
Debra.Turner@rrc.texas.gov
- Margot Buyens (512) 463-2903
Margot.Buyens@rrc.texas.gov

Class II Injection & Disposal Well Permitting



Preliminary (Administrative) Review

- Check Organization Report (Form P-5)
 - Check for current P-5 on file
 - Check corporation franchise taxes are paid
- Check Certificate of Compliance (Form P-4)
 - Verify that applicant is operator of lease
 - For a new lease, file Form P-4 with completion report
- Check UIC Well Inventory
 - Is this application for a new or amended permit?

Class II Injection & Disposal Well Permitting



Dual Authorities

- Only one permit may be valid on an injection/disposal well at any given time
 - An amended permit supersedes the old permit
- Plan re-permitting to coincide with workover
- Whenever a dual authority is discovered, the older permit is cancelled

Class II Injection & Disposal Well Permitting



Permit applications will be administratively denied if the subject well is under severance or seal-in for Rule or permit violations on that well. This policy does not apply to permit amendment applications, that, if granted, would return the subject well to compliance.

Class II Injection & Disposal Well Permitting



Attachments: Notice

- Mail or deliver a copy of the application form(s) (W-14 or H1/H-1A, *front and back*) to:
 - The surface owner of record (county deed or tax rolls)
 - Adjoining surface owners of record if application is for a commercial disposal well
 - Operators of wells within a ½ - mile radius of the proposed injection/disposal well

Class II Injection & Disposal Well Permitting



Attachments: Notice (Continued)

- Mail or deliver a copy of the application form(s) (W-14 or H1/H-1A, *front and back*) to:
 - The county clerk
 - The city clerk if well is located within corporate city limits
 - Recommend including a cover letter briefly explaining the nature of the application.

Class II Injection & Disposal Well Permitting



Attachments: Notice

Please submit the following

- Plot showing the location and operator of wells within $\frac{1}{2}$ - mile radius of the propose injection/disposal well.
- For a commercial disposal well application, provide a plat showing clearly the owner of record of the adjoining surface tracts and tract boundaries.

Class II Injection & Disposal Well Permitting



Attachments: Notice (Continued)

Please submit the following

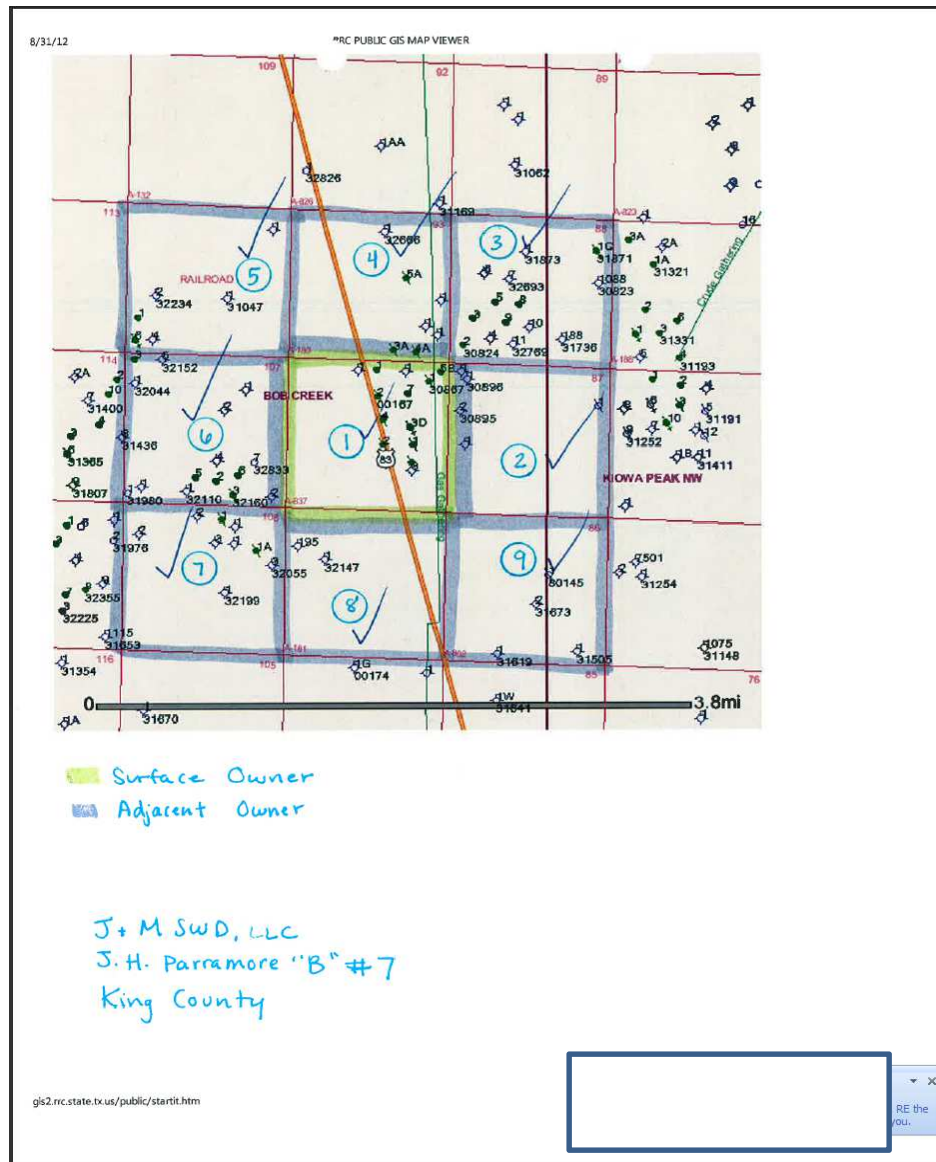
- A list of the names and addresses of the surface owner(s), operators of wells within $\frac{1}{2}$ - mile radius, county clerk, and (city clerk and adjoining surface owners, if applicable)
- A signed statement indicating the date that a copy of the application form(s), *front and back*, was mailed or delivered to those parties requiring notice.

Class II Injection & Disposal Well Permitting



Operators of wells within ½ miles must be notified regardless of the status of the wells. The only wells that may be excluded are wells that have been permanently plugged and abandoned.

Class II Injection & Disposal Well Permitting



Class II Injection & Disposal Well Permitting



SERVICE LIST
RRC FORM H-1/H-1A
J & M SWD, LLC
"J.H. Parramore-B-" Well #7
King County, TX

✓ **COUNTY CLERK:**

JAMMYE D. TIMMONS
P.O. BOX 135
GUTHRIE, TX 79236

✓ **SURFACE OWNER:**

TRACTS #1, 2, 8, 9
J H JR PARRAMORE EST LLC
2302 GATHRIGHT DR
ABILENE, TX 79606

ADJACENT SURFACE OWNERS:

TRACTS #3, 4
NIBLO FAMILY PARTNERSHIP LTD
104 PINE STREET SUITE 601
ABILENE, TX 79601 ✓

TRACTS #5, 6
TOM & TRUMAN BACON
1217 CR 126
CISCO, TX 76437 ✓


TRACT #7
SUZANNE CRUM
BOX 130
CHEROKEE, TX 76832 ✓

✓ **OFFSET OPERATORS:**

✓ J & M SWD, LLC
PO BOX 616
STAMFORD, TX 79553

✓ PATTON EXPLORATION, INC.
P O BOX 3399
ABILENE, TX 79604

The above were mailed copies – (Front and Back) of RRC Forms H-1/H-1A via certified mail on September 5, 2012.

✓

Krystal Eversdyk
Agent for J & M SWD, LLC

Example:
Signed and dated notice
certification page

Class II Injection & Disposal Well Permitting



Attachments: Publication

- **Publish**
 - notice for one day in a newspaper with general circulation in the county.
- **Submit**
 - Notarized affidavit of publication
 - Newspaper clipping
- **Publication and affidavit shells available on RRC website - Injection Permitting Manual**
- **15 day waiting period after notice and publication**

Class II Injection & Disposal Well Permitting



Publication Guidelines

- Notice must be published for one day at operator expense.
- The direction and miles to nearest town must be consistent with the application
- The injection/disposal interval must be consistent with the application
 - For H-1 applications with several wells on one application/notice, use depth of the shallowest top and deepest bottom for the published subsurface interval

Class II Injection & Disposal Well Permitting



Publication Guidelines

- The newspaper need not be in the same county as the well, but must have general circulation in that county.
- The legal authority, notice of opportunity/instructions to protest application, and RRC contact information must be included in publication
- The newspaper publication must state that the application is for a “commercial” disposal well, if applicable
- The affidavit must state that the newspaper is of general circulation in the county where the proposed injection/disposal well is to be located.

Class II Injection & Disposal Well Permitting



Technical Review:

Attachments: Electric Log

- A complete electric log or similar log of the proposed injection/disposal well
- The log must include the header and show the proposed injection/disposal zone and overlying formations.
- If well log is not available for proposed well, a log from a nearby well may be submitted (include plat showing location)
- If multiple wells covered by one Form H-1, only one well log is required.

Class II Injection & Disposal Well Permitting



Attachments: Groundwater depth letter

- **RRC Groundwater Advisory Unit (GAU) formerly TCEQ Surface Casing**
- **H-1/H-1A: Form GW 2 (or TCEQ letter if less than 5 years old) stating the depth to which usable quality groundwater must be protected. The form is commonly referred to as “water board letter”, “surface casing letter” and most recently “TCEQ letter”.**
- **Form W-14: Submit GAU letter stating that the proposed injection will/will not endanger usable quality groundwater. Request through GAU by providing Form GW 1, two copies of Form W-14, a plat showing well location within survey, and a representative electric log**

Class II Injection & Disposal Well Permitting



Attachments: Area of Review (1/4-mile AOR)

- Applicant for a injection/disposal well permit must provide the data of record for wells that penetrate the proposed injection zone within (at least) one quarter (1/4) mile. – expanded when appropriate.
- Confirm wells are 1) active “on-schedule” wells or, 2) have been plugged in a manner that will prevent the movement of fluids into strata other than the authorized injection or disposal zone.
- For Area permit application, the AOR covers the entire lease and a ¼ - mile buffer surrounding the lease border

Class II Injection & Disposal Well Permitting



Area of Review (1/4-mile AOR)

Submit:

- Plot of all wells with a ¼-mile radius of the proposed injection/disposal well showing the total depth of each well. May submit plot generated using the RRC GIS Public Map Viewer or operator generated plot. Always provide scale.
- Table of wells within the ¼-mile radius. For each well show
 - Lease name and number
 - Well number
 - API number
 - Total depth
 - Date drilled
 - Current Status (i.e., producing, shut-in, PA'd, etc.)
 - Plug date (if applicable) – providing copies of plugging reports will expedite processing

Class II Injection & Disposal Well Permitting



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Thank you for visiting the new Railroad Commission website

To view the old Railroad Commission of Texas website [Click Here](#). That website will be available to the public until July 1, 2014. Please note that the old website's web content is no longer being updated.

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GIS MAP VIEWERS

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Public GIS Viewers (Maps)

RRC has two ways for you to view oil, gas, and pipeline data in a map view.

Enhanced Public GIS Viewer



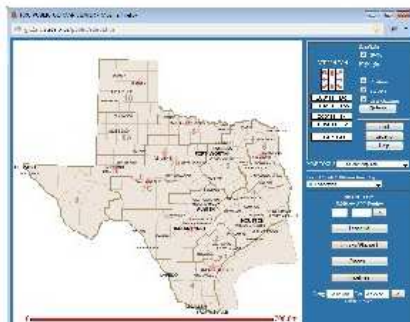
Enhanced GIS Viewer

This enhanced Public GIS Viewer provides modernized functionality with improved searching and navigating through the Railroad Commission's GIS database, as well as providing nine distinct and up-to-date basemap layer options which include streets, aerial imagery, and others. Enhanced printing and address location are also now available with the new viewer. Survey & Pipeline searches will be added in future releases of the viewer. The legacy GIS Viewer will remain until all search functionality has been added to the new viewer.

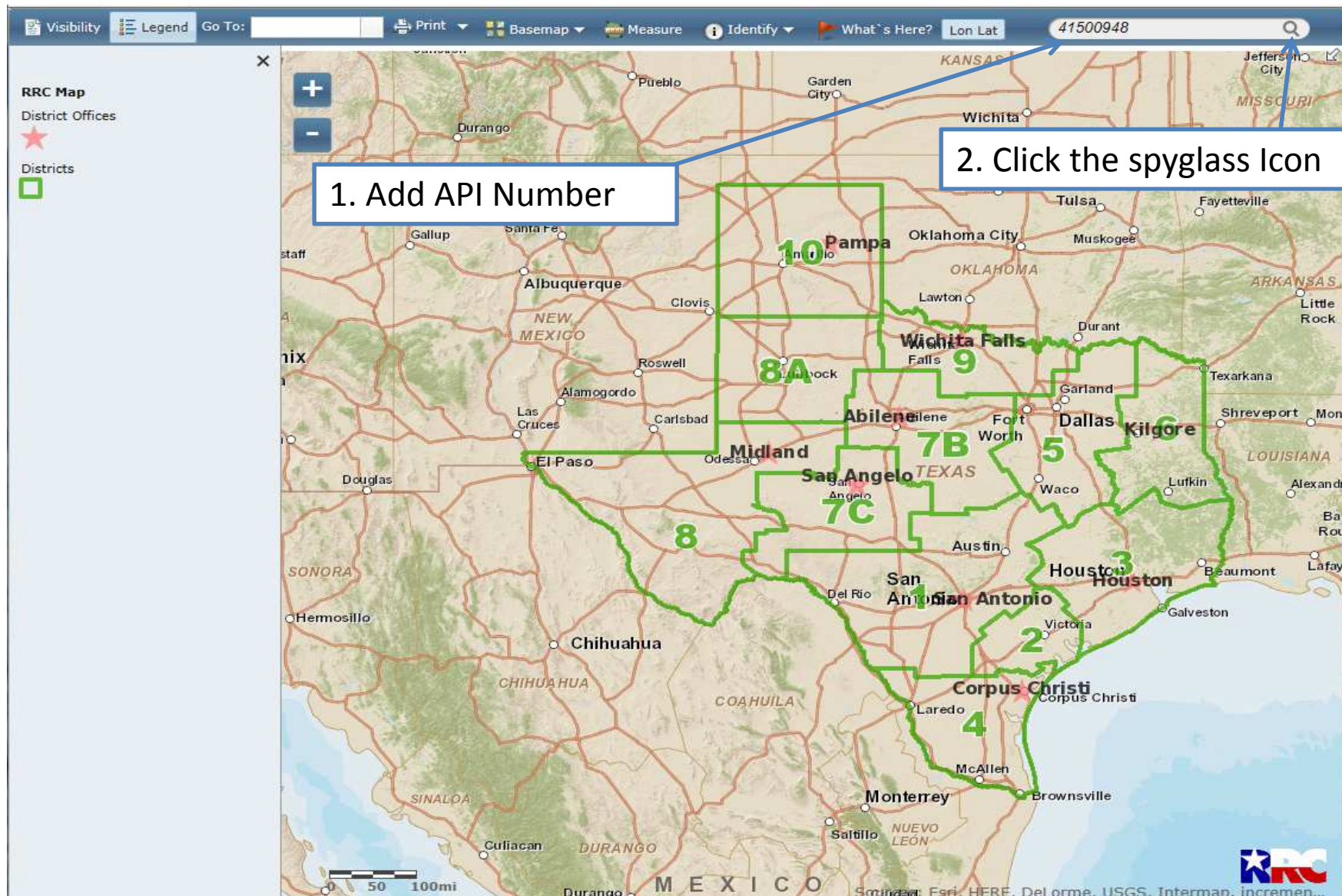
[Launch Enhanced Public GIS Viewer](#)

* **Best viewed with Mozilla Firefox. Internet Explorer 9.0 and below are not recommended.**

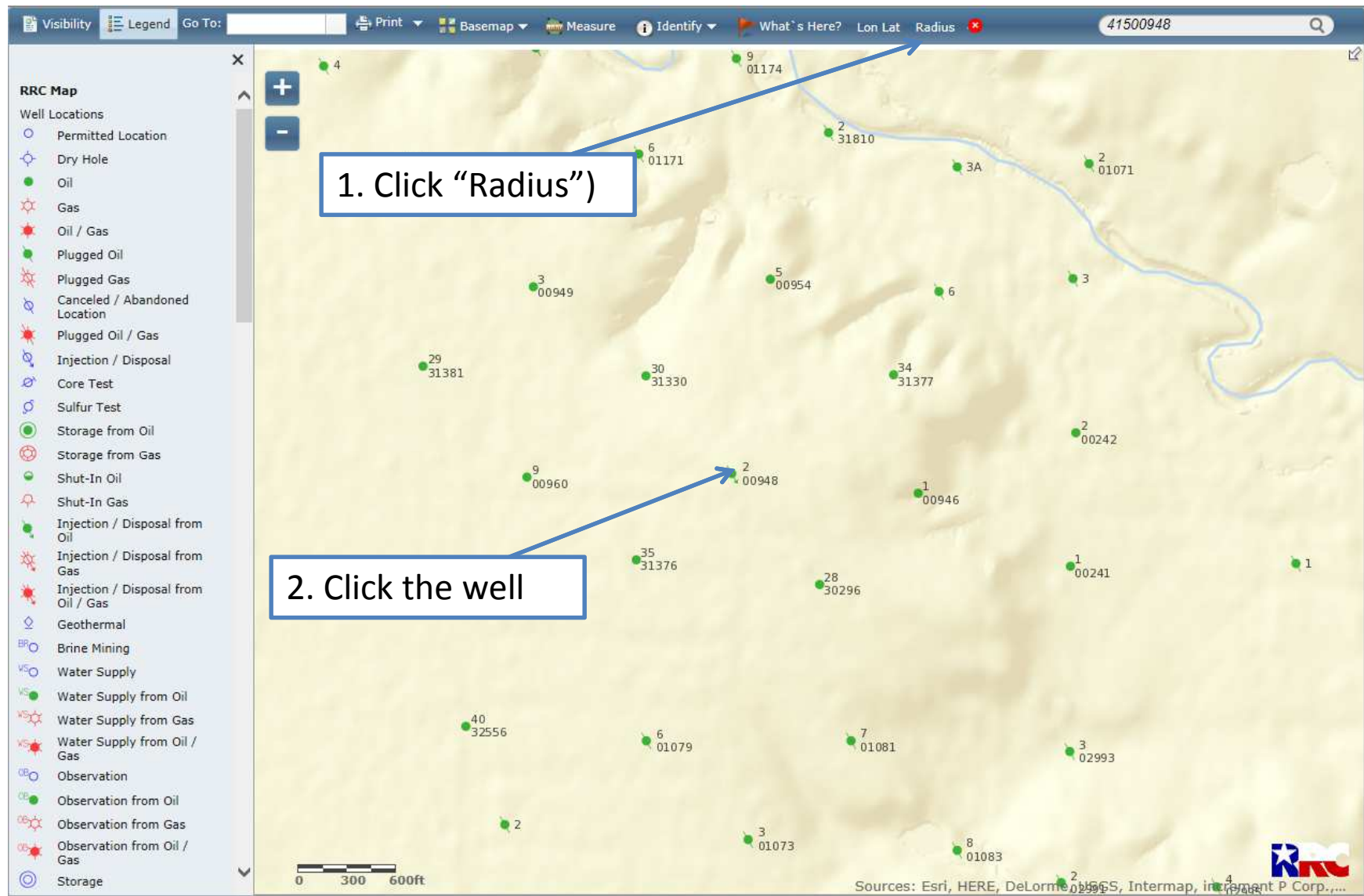
Legacy Public GIS Viewer



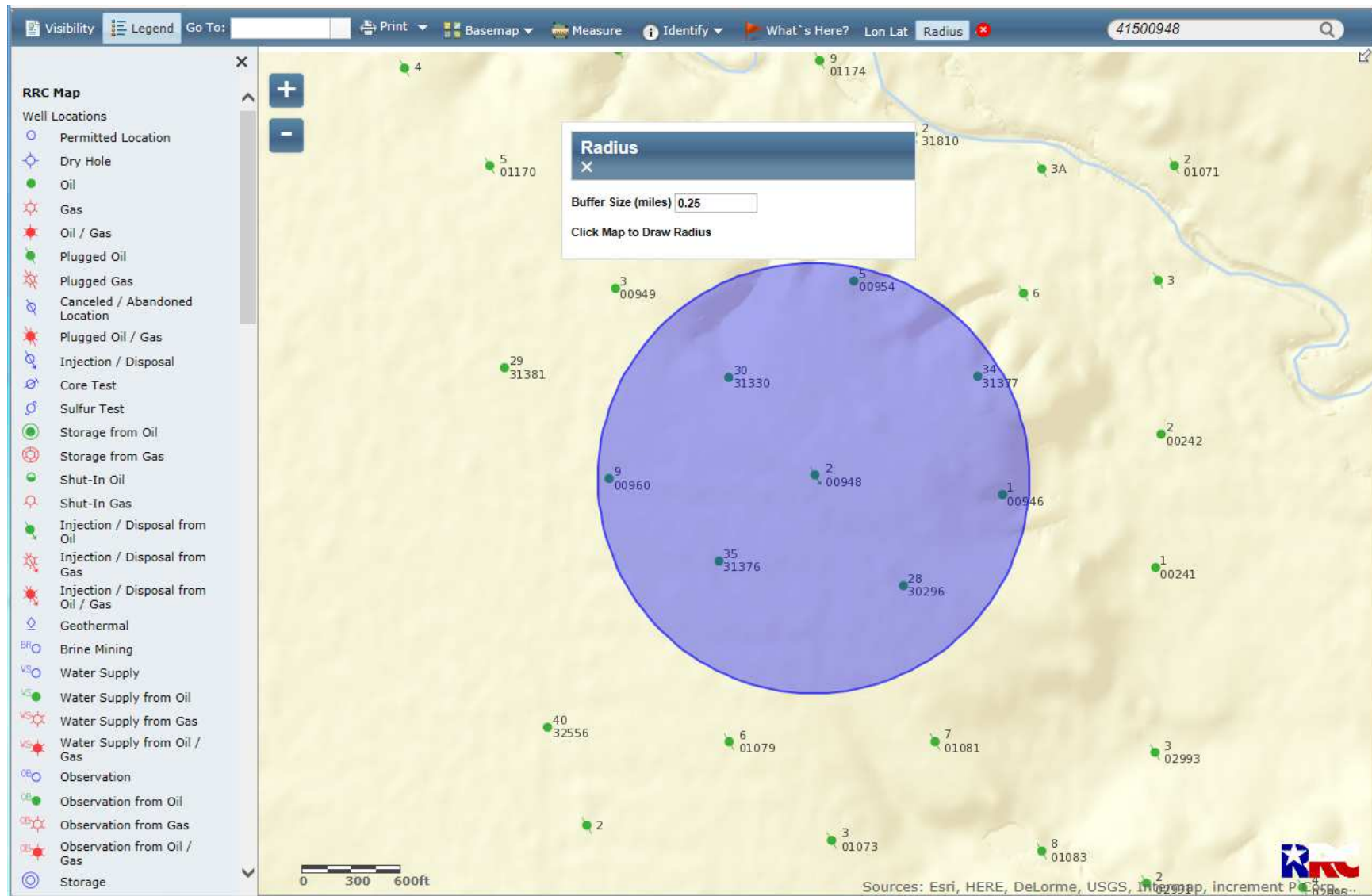
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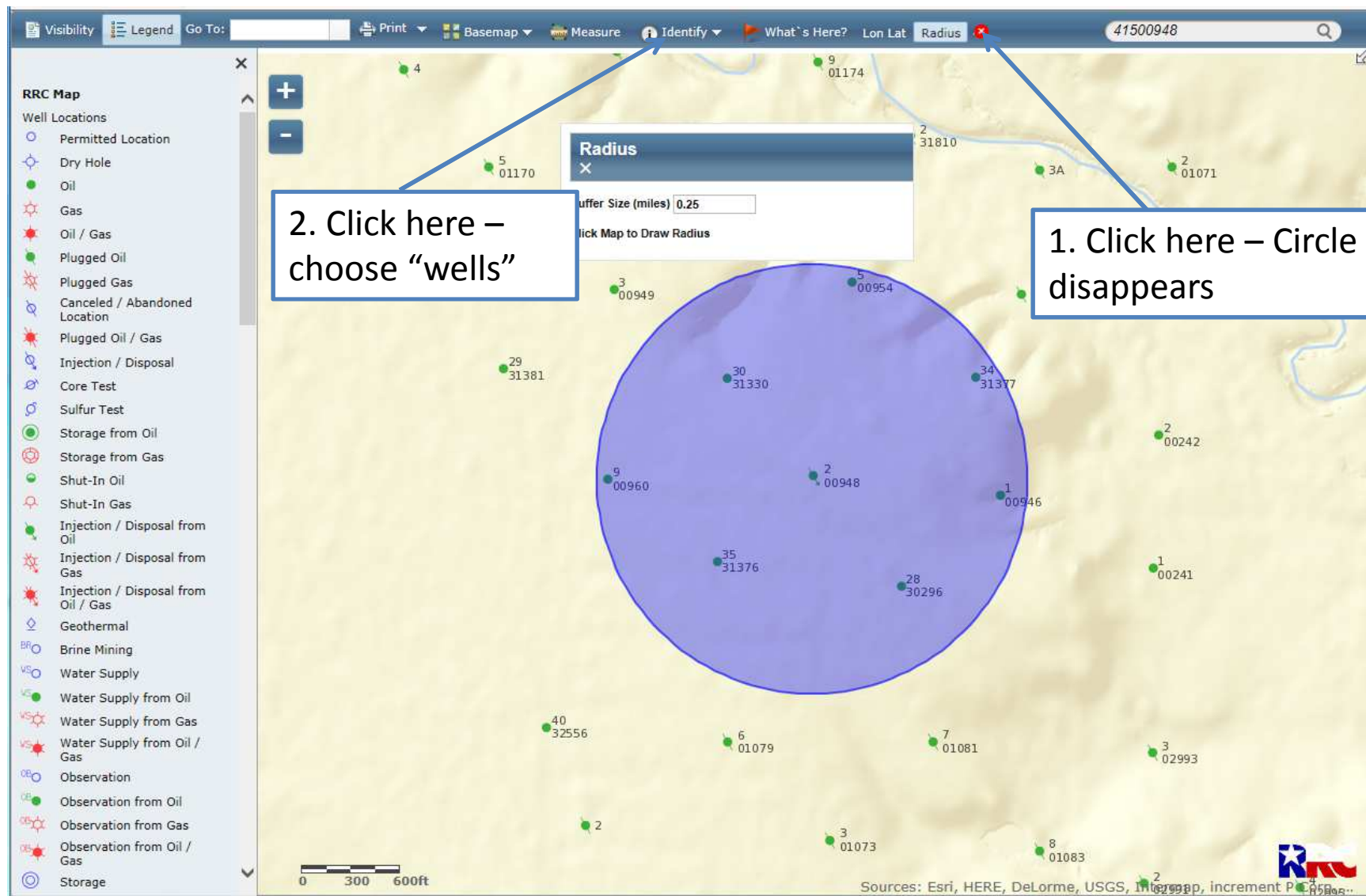
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Class II Injection & Disposal Well Permitting



Class II Injection & Disposal Well Permitting



Class II Injection & Disposal Well Permitting



1. Click here, box appears, scroll down

2. Original center of circle -

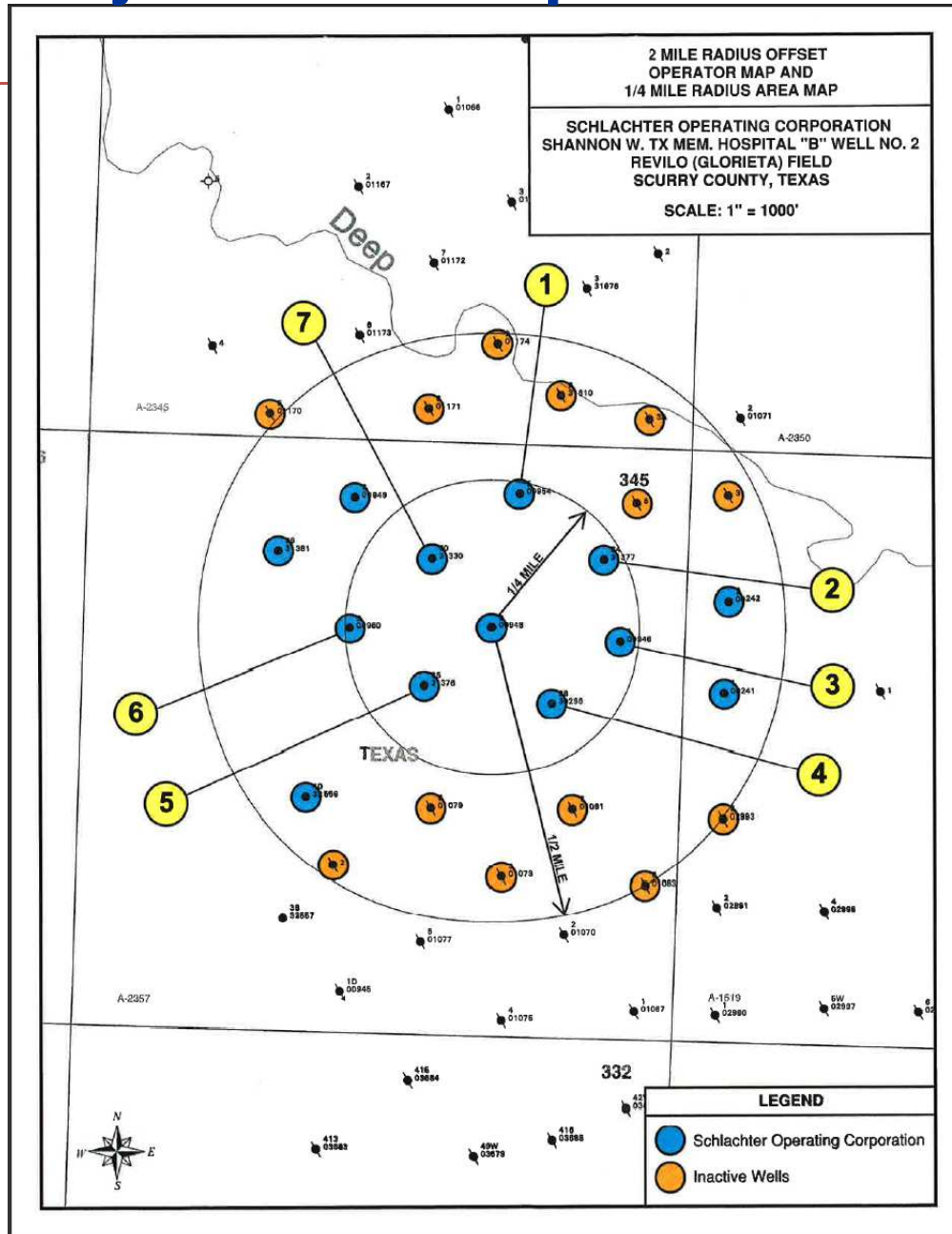
3. Status of well is "On Schedule", and "Producing"

GIS Identify Results - Well Location Attributes

COMPLETION RECORD	OIL
PRORATION SCHEDULE	8A
DISTRICT	10789
LEASE/ID	753981
OPERATOR NUMBER	SCHLACHTER OPERATING CORPORATION
OPERATOR	SHANNON W. TX MEMORIAL HOSPITAL
LEASE NAME	REVILO (GLORIETA)
FIELD	9
WELL NUMBER	PRODUCING
TYPE WELL	YES
ON SCHEDULE	Oil/Gas Imaged Records for Lease/ID: 10789
Production Data Query(PDQ)	

Sources: Esri, HERE, DeLorme, USGS, Imagery, Mapbox, OpenStreetMap, etc.

Class II Injection & Disposal Well Permitting



Class II Injection & Disposal Well Permitting



1/4 MILE RADIUS WELL TABULATION
SCHLACHTER OPERATING CORPORATION
SHANNON W. TX MEM. HOSPITAL "B" WELL NO. 2
REVILO (GLORIETA) FIELD
SCURRY COUNTY, TEXAS

MAP #	OPERATOR NAME LEASE NAME & WELL #	API #	FIELD NAME	DATE DRILLED	TOTAL DEPTH	STATUS
1	Schlachter Operating Corporation Shannon W. TX Mem. Hospital "B" #5	415-00954	Revilo (Glorieta)	06/21/57	2878'	On Schedule - Producing
2	Schlachter Operating Corporation Shannon W. TX Mem. Hospital "B" #34	415-31377	Revilo (Glorieta)	08/23/79	2914'	On Schedule - Producing
3	Schlachter Operating Corporation Shannon W. TX Mem. Hospital "B" #1	415-00946	Revilo (Glorieta)	04/13/57	2893'	On Schedule - Producing
4	Schlachter Operating Corporation Shannon W. TX Mem. Hospital "B" #28	415-30296	Revilo (Glorieta)	04/09/74	2845'	On Schedule - Producing
5	Schlachter Operating Corporation Shannon W. TX Mem. Hospital "B" #35	415-31376	Revilo (Glorieta)	08/29/79	2928'	On Schedule - Producing
6	Schlachter Operating Corporation Shannon W. TX Mem. Hospital "B" #9	415-00960	Revilo (Glorieta)	07/18/57	2907'	On Schedule - Producing
7	Schlachter Operating Corporation Shannon W. TX Mem. Hospital "B" #30	415-31330	Revilo (Glorieta)	04/12/79	2900'	On Schedule - Producing

* Plugging reports attached hereto for all wells
which are currently plugged as shown above.

Class II Injection & Disposal Well Permitting



Attachments: Fresh Water Injection for EOR

- If application to inject fresh water, the following attachments are required:
 - Fresh water questionnaire.
 - Form H-7
 - Required unless fresh water is purchased commercially
 - Include plat of fresh water rights
 - Chemical analysis of the fresh water

Class II Injection & Disposal Well Permitting




Permit Amendments

- Filing requirements vary with type and magnitude of amendment
- Filing fee and surcharge (per well) is required in all cases
- Well log, groundwater letter, AOR map and table are usually required only for zone amendments or permits issued prior to April 1982
- Refer to tables on Injection Permitting Seminar Manual available on RRC website.

Class II Injection & Disposal Well Permitting




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Injection/Disposal Well Permit Testing and Monitoring Seminar Manual

Guidelines for Permit Amendments-Disposal Into Productive Formations

Texas Railroad Commission Statewide Rule 46

FILING REQUIREMENTS	To Amend Injection Interval	To Amend Injection Pressure	To Amend Injection Fluid Type	To Amend Fresh Water Volume	To Amend Injection Volume	To Amend to Commercial
Filing Fee: \$200 per well	Yes	Yes	Yes	Yes	Yes	Yes
Application Form: (Forms H-1 and H-1A)	Yes	Yes	Yes	Yes	Yes	Yes
Electric Log	Yes, unless previously filed	No	No	No	No	No
TCEQ Water Protection Depth Letter	Yes, unless previously filed	No	No	No	No	No
Area of Review: Map of Wells	Yes, if current permit issued before 4/1/82 or change is uphole	No	No	No	No	No
Area of Review: Table of Wells	Yes, if current permit issued before 4/1/82 or change is uphole	No	No	No	No	No
Step-Rate Test	No	Yes, if pressure > 0.5 psi/ft.	No	No	No	No
Fresh Water Data Form (Form H-7)	No	No	Yes, if Fresh Water	Yes, if different freshwater source	No	No
Fresh Water Questionnaire	No	No	Yes, if Fresh Water	Yes	No	No
Ownership Survey Map to show wells/operators within one-half mile radius	Yes	Yes	Yes	Yes	Yes	Yes

Internet
100%

Class II Injection & Disposal Well Permitting



Technical Review: Surface Casing

- Base of usable quality groundwater (BUQW) determined by GAU
- Commercial and new injection/disposal wells must set and cement surface casing through the BUQW
- Wells converted from production are reviewed on a case by case basis (lease injection/disposal).
 - If permitted, may require more frequent testing and monitoring (annual mechanical integrity (MIT) testing and weekly tubing-casing annulus monitoring (TCAM) vs. 5-year MIT and monthly TCAM if well is constructed to current standards.



Class II Injection & Disposal Well Permitting

Technical Review: Production Casing Cement

- **Cement must be adequate to confine fluids to the injection interval**
- **If top of cement (TOC) is based on volume calculation**
 - **At least 400 feet of cement above zone**
 - **May require up to 600 feet of cement if high yield cement is used**
- **RRC rules have required 600 feet of cement above casing shoe, or shallowest productive interval since 1932**

Class II Injection & Disposal Well Permitting



Technical Review: Production Casing Cement

- **If TOC is based on temperature survey run at time of cementing:**
 - Show at least 250 feet of cement above zone
- **If TOC is based cement bond log:**
 - Show at least 100 feet of cement above the zone
 - Have at least 80% bond
 - The cement must be well bonded to the casing and formation
 - There must be no indication of channeling

Class II Injection & Disposal Well Permitting



Technical Review: Geological Requirements

- The injection zone must be isolated from overlying usable quality groundwater by 250 feet of clay or shale (cumulative).
- Wells without adequate separation will have injection fluids limited to fluids produced from the injection formation and on the same lease, if approved (applied to Rule 46 wells only).

Class II Injection & Disposal Well Permitting



Technical Review: Area of Review

- All abandoned wells within the $\frac{1}{4}$ - mile AOR must be adequately plugged (cement plug between top injection formation and BUQW).
- The applicant may calculate the actual affected radius to justify a lesser radius than $\frac{1}{4}$ -mile.
- Pressure front (affected radius) calculations must be prepared by a Texas Registered Professional Engineer

Class II Injection & Disposal Well Permitting



Technical Review: Packer setting depth

- Rule 9:
 - The packer must be set within 100 feet of the permitted zone
- Rule 46:
 - While Rule 46 allows for flexibility in the packer setting depth (150 feet below deepest groundwater and 200 feet below TOC), staff recommends the packer be set within 100 feet of the permitted zone
 - There must be no potential injection/disposal zones between the packer and the top of the permitted zone

Class II Injection & Disposal Well Permitting



Technical Review: Injection Pressures

- Typically, the permit maximum injection pressure will be the pressure requested up to 0.5 psi/foot of depth to injection zone
- Injection pressure is limited to $\frac{1}{4}$ - psi per foot of depth in some areas (coastal wells at depths of 2000 feet or less, Barnett Shale).
- Applicant may perform a fracture step-rate test to measure the actual fracture pressure and to justify a higher permit pressure

Class II Injection & Disposal Well Permitting



Technical Review: Injected Fluids

- Limited to the injection of produced salt water unless other fluids are specified (see Item 45 on Form H-1)
- Applicant must show there is no technical or economically feasible alternative to injection of fresh water for EOR.
- Disposal wells are typically limited to disposal of RCRA exempt exploration and production waste
- Injection of Hydrogen Sulfide requires “well-specific” authority (SWR 36)

Class II Injection & Disposal Well Permitting



Technical Review: Commercial Facilities

- Surface facility requirements are added to address spill prevention, containment, pit permitting and security issues
- A well is commercial if:
 - Waste is partially or wholly trucked in
 - A fee or other compensation is charged for disposal

COMMERCIAL DISPOSAL

SURFACE FACILITY REQUIREMENTS



- All collecting pits, skimming pits, or washout pits must be permitted under the requirements of Statewide Rule 8.
- Catch basin(s) catch oil and gas waste which may spill as a result of connecting and disconnecting hoses or other apparatus while transferring oil and gas waste from tank trucks.
- Waste storage and pretreatment facilities (tanks, separators, or flow lines) shall be constructed of steel, concrete, fiberglass, maintained so as to prevent discharges.
- Dikes shall be placed around all waste storage, pretreatment, or disposal facilities. The dikes shall be designed so as to be able to contain a volume equal to the maximum holding capacity of all such facilities. Any liquids or wastes that do accumulate in the containment area shall be removed within 24 hours and disposed of in an authorized disposal facility.
- Must have security to prevent unauthorized access. Access shall be secured by a 24-hour attendant, a fence and locked gate when unattended, or a key-controlled access system. For a facility without a 24-hour attendant, fencing shall be required unless terrain or vegetation prevents truck access except through entrances with lockable gates.
- Storage tank(s) equipped with a device (visual gauge or alarm) to alert drivers when each tank is within 130 barrels from being full.

Class II Injection & Disposal Well Permitting



Technical Review: Barnett Shale

Non-commercial shallow injection/disposal in the Barnett Shale area (shallower than the Barnett Shale) is limited to:

- Injection volume limited to 5,000 bpd
- Injection pressure limited to $\frac{1}{4}$ psi per foot of depth
- Unless the applicant can show that all wells within a $\frac{1}{2}$ -mile radius have been adequately plugged or cemented across the injection/disposal interval

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Technical Review: Barnett Shale

For all commercial and non-commercial injection/disposal over 5000 bpd:

- Perform reservoir pressure increase calculations and show that all wells in the affected area have been adequately plugged or cemented across the injection/disposal interval
- Disposal in the deeper Ellenburger in this area limited to 25,000 bpd with disposal no less than 250 feet below the base of Barnett Shale.

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Permit Processing

Permit Denials

- Application is still incomplete after two additional filings
In this case, the permit is returned and the applicant may re-apply with applicable forms, fees, and attachments.
- Denial based on unsatisfactory completion or operating proposal
 - The applicant may modify the application to allow for administrative approval, or
 - Request a hearing before the Commission. The application must be administratively complete before a hearing date can be set.

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Protested Applications

- Staff may administratively issue a permit only in the absence of a protest
- A protest may be filed anytime before a permit is issued

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Protested Applications

Who can protest?

- Affected parties
 - Operators of wells within ½ mile
 - Surface owner of record
 - Adjoining surface owners for commercial well
- Local government (such as city or water district)
- Other parties when it is determined by the RRC to be in the public interest
 - Offset surface or mineral owners
 - Other government agencies
 - Members of the general public
- Staff does not evaluate the validity of a protest

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Protested Applications

Options for applicant

- Withdraw the application
- Obtain a letter from the protestant withdrawing the protest
- Request a hearing
 - The application must be administratively complete to schedule a hearing
 - The hearing will determine whether the permit should be issued

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Upon Conversion

- **Perform a mechanical integrity test immediately**
 - **H-5 Form: Forms online, Handouts**
- **File a completion report (Form W-2/G-1) as required by Rule 16 - Forms online, Handouts**
 - **Filing completion report on-line greatly reduces processing time**
 - **Completion reports must be completely filled out**
 - **Lease numbers for new leases are assigned after final processing/approval of completion report.**

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Application vs. Construction

- The well must be constructed and operated as proposed and permitted
- Significant changes will require permit amendment, or may result in enforcement or permit revocation
- Permit-required remedial action must be done before injection begins.

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Seismic Issues:

16 TAC §3.9 (3) (B), or §3.46 (b) (1) (B)

The applicant for a disposal well permit under this section shall include with the permit application a printed copy or screenshot showing the results of a survey of information from the United States Geological Survey (USGS) regarding the locations of any historical seismic events within a circular area of 100 square miles (a circle with a radius of 9.08 kilometers) centered around the proposed disposal well location.

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Seismic Issues:

Historical Seismic Events:

Any application for a new disposal well permit or permit amendment for pressure, injection rate, or interval must include a survey of historical seismic events. A survey of historical seismic events is a printed copy or screenshot as described above.

The USGS Earth Archive Search may be found at the following link:

(<http://earthquake.usgs.gov/earthquakes/search/>).

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Seismic Issues:

To use the USGS Earth Archive Search, enter the following parameters:

- DATE & TIME: Start (UTC): Enter USGS Database entries: 1973-01-01 00:00:00
- MAGNITUDE: Minimum: Enter 1, or 0
- CIRCLE: Center Latitude and Center Longitude; Enter the location of the proposed Disposal Well using a WGS84 or NAD83 datum.
- CIRCLE: Inside Radius; Leave blank or enter 0
- CIRCLE: Outside Radius; Enter 9.08

Class II Injection & Disposal Well Permitting



Seismic Issues:

From your search, include the page depicting your inputs, and the map that results.

The map should display details about each event, including location, magnitude and date.

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Seismic Issues:

Basic Options

Date & Time

Start (UTC)

1973-01-01 00:00:00

End (UTC)

2015-05-14 23:59:59

Magnitude

Minimum

1

Maximum

Depth (km)

Minimum

Maximum

Geographic Region

Currently searching custom region

[Clear Region](#)

Rectangle

Decimal degree coordinates. North must be greater than South. East must be greater than West.

Draw Rectangle on Map

North

West

East

South

Circle/ Donut

Specify an inner radius to perform a donut search.

Center Latitude

30.604599

Center Longitude

-96.247692

Inner Radius (km) Optional

Outer Radius (km)

9.08

x

Advanced Options

Azimuthal Gap

Minimum

Maximum

Review Status

- ☒ Any
☐ Automatic
☐ Reviewed

☐ Event Type

☐ Impact (PAGER, ShakeMap, DYFI)

☐ Catalog

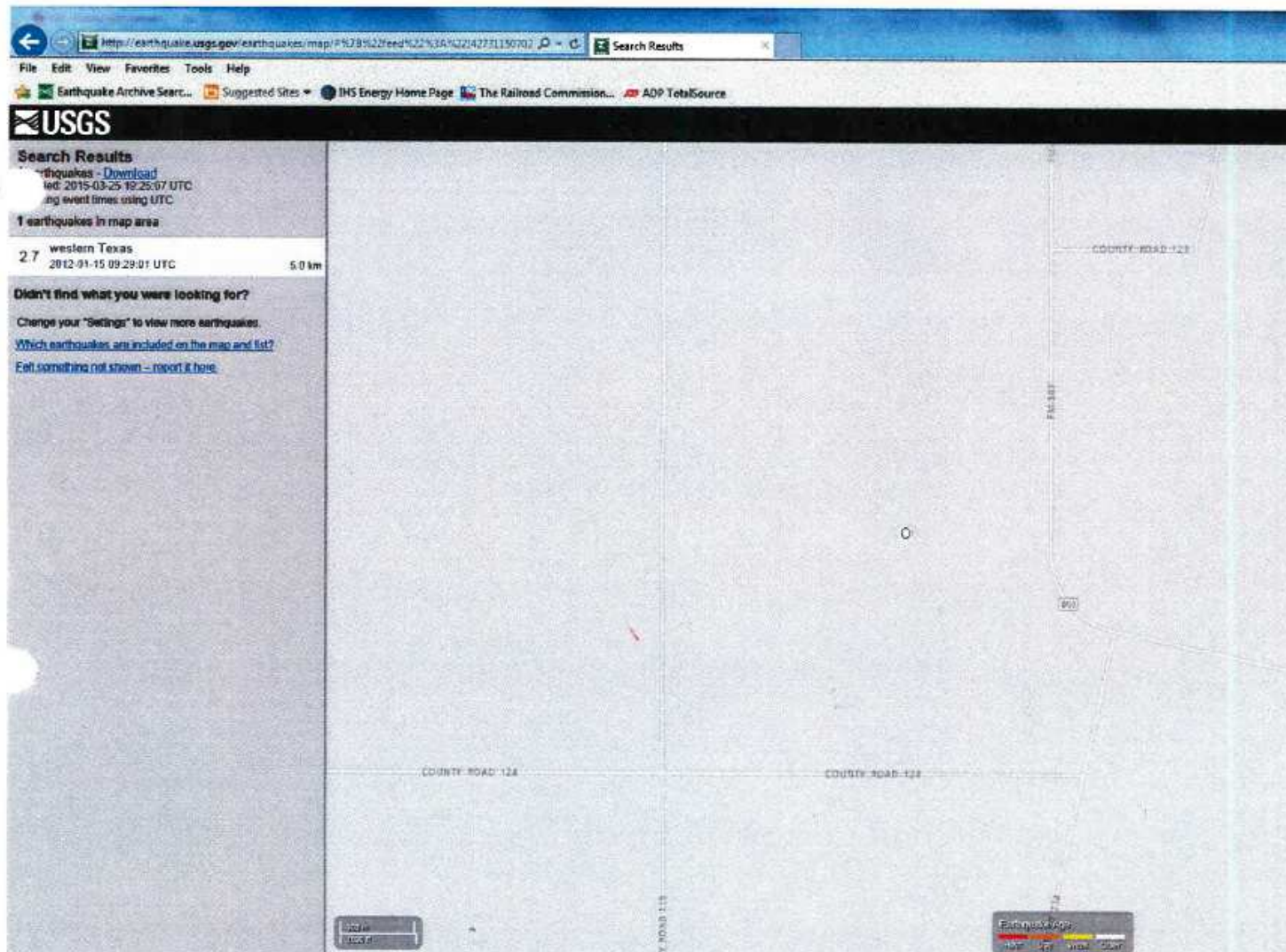
☐ Contributor

☐ Product Type

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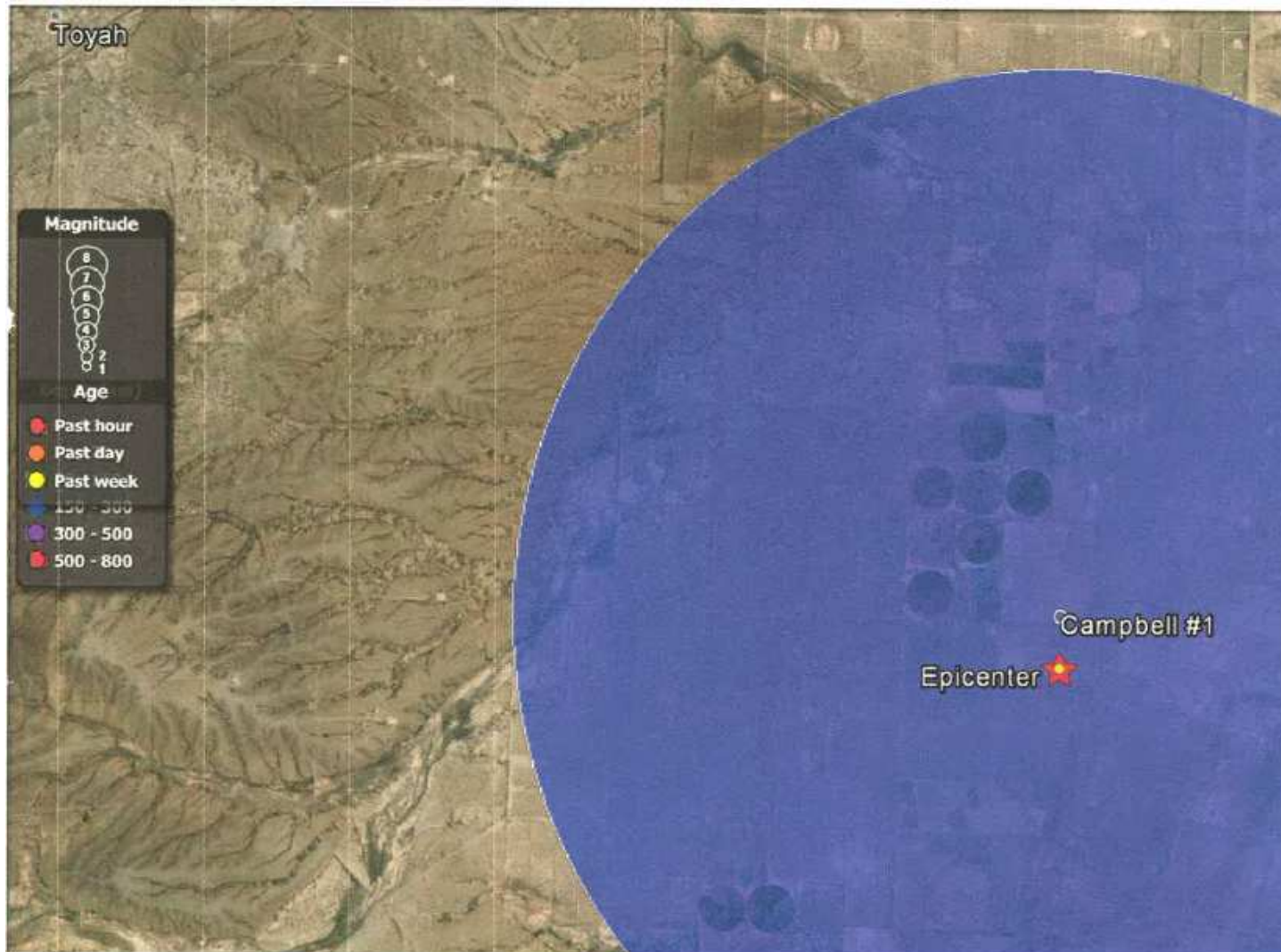
Seismic Issues:



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Seismic Issues:



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Seismic Issues:

RULE §3.9 (6) (A) or §3.46 (d) (1) (F)

Subsequent commission action.

- A permit for saltwater or other oil and gas waste disposal well may be modified, suspended, or terminated by the commission for just cause after notice and opportunity for hearing, if:
(multiple reasons listed)

** injection is likely to be or determined to be contributing to seismic activity;*

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Thank you for visiting the new Railroad Commission website

To view the old Railroad Commission of Texas website [Click Here](#). That website will be available to the public until July 1, 2014. Please note that the old website's web content is no longer being updated.

Railroad Commission of Texas

The Railroad Commission serves Texas through:

- our stewardship of natural resources and the environment;
- our concern for personal and community safety; and
- our support of enhanced development and economic vitality for the benefit of Texans.

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The Texas average rig count as of May 16 was 889, representing about 50 percent of all active land rigs in the United States [Read More...](#)

[TEXAS MONTHLY OIL AND GAS STATISTICS](#)

May 27, 2014

The Commission issued a total of 1,919 original drilling permits in April 2014 compared to 1,996 in April 2013. The March total included 1,742 permits to drill new oil and gas wells, 40 to re-enter existing well bores, and 137 for re-

Commissioners



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Type of Query		
Drilling Permit (W-1) Query		Launch application
Electronic Document Management System	Learn more	Launch application
Gas Proration Query	Learn more	Launch application
H-10 Annual Disposal/Injection Well Monitoring Report Query	Learn more	Launch application
Inactive Well Query		Launch application
Inactive Well Aging Report Query	Learn more	Launch application
Injection/Disposal Permit Query	Learn more	Launch application
Maps - Enhanced Public GIS Viewers	Learn more	Launch application
Maps - Legacy GIS Public Viewer	Learn more	Launch application
New Lease IDs Built Query	Learn more	Launch application
Oil & Gas Completion Query		Launch application
Oil & Gas Field Rules Query		Launch application
Oil & Gas Imaged Records Menu	Learn more	Launch application
Oil Proration Query	Learn more	Launch application
Organization (P-5) Query	Learn more	Launch application
Orphan Well Query		Launch application
P-4 Gatherer/Purchaser Query	Learn more	Launch application
Production Data Query (limited area)	Learn more	Launch application
Production Reports Query (Form PR)		Launch application

3. Search

2. Search

1. Search

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The End

